

# Floriculture & Greenhouse Management – Semester A

**Levels:** Grades 9-12

**Units of Credit:** Year (0.5)

**CIP Code:** 010631

**Prerequisite:** None

## COURSE DESCRIPTION

Students will be exposed to greenhouse operations and management practices that will prepare the students to produce commercial plant species in a controlled environment and to manage commercial and experimental greenhouse operations.

## CORE STANDARDS, OBJECTIVES, AND INDICATORS

### STANDARD

**010631-01** Students will understand the integral nature of the Agricultural Education Program.

### OBJECTIVES

**010631-0101** Students will understand and demonstrate the role of FFA in Agricultural Education.

- Write or recite the FFA motto
- List the FFA colors
- List and describe the symbols of the FFA emblem
- List and describe the four kinds of membership
- Write the primary aim of the FFA
- List six specific purposes of the FFA
- State the proper uses of the FFA jacket and the Code of Ethics for FFA members
- Identify the correct date for the historical highlights of FFA
- List the four FFA degrees
- Name the offices and symbols for each office in the FFA
- List eight ways to work toward becoming a chapter leader
- Describe the official dress code for females and males in the FFA
- List four benefits when participating in the FFA
- Recite the FFA Creed
- Attend an FFA meeting
- List two specific duties of FFA chapter officers
- List two of the State, National contests and FFA awards
- Develop leadership qualities for personal goals using communication skills
- Outline the leadership structure in the FFA (committees, officer responsibilities)
- Demonstrate a members role in opening and closing ceremonies

**010631-0102** Students will understand and demonstrate the role of Supervised Agricultural Experience (SAE) Program in Agricultural Education

- Identify agricultural interests and/or career goals
- Define SAE and identify the types of SAE
- List reasons for participating in a SAE
- Define improvement activities and identify their role in SAE programs
- List five characteristics of a SAE
- List six responsibilities in conducting a SAE

- Prepare a plan for a long-term SAE
- Arrange in order steps involved in obtaining a loan from a credit service
- List the types of SAE records
- List five reasons for keeping records on a SAE
- In an approved record book, record all transactions and activities on a SAE
- Explain why record keeping is important in obtaining a loan from the bank
- Determine the overall quality of current SAE and determine how to make it more productive or profitable

## **STANDARD**

**010631-02 Students will demonstrate an understanding of the principles and elements of floral design by designing various arrangements.**

## **OBJECTIVES**

**010631-0201** Student will illustrate the principles and elements of design through proper design techniques including:

- Proportion
- Scale
- Balance
- Rhythm
- Dominance
- Line
- Shape and form
- Pattern and texture
- Color
- Space
- Size

**010631-0202** Students will select and prepare accessories for various arrangements and occasions.

- Make bows
- Use tulle, ribbon, netting and lace
- Use mechanical aides
- Wash and prepare container
- Identify and mix preservatives and treatments

**010631-0203** Students will prepare flowers, foliage, and plants for use in a floral arrangement.

- Identify flowers, foliage, and plants used in floral arrangements
- Separate flower varieties
- Identify flower temperature needs
- Identify sources and effects of ethylene
- Use proper cutting techniques
- Select flowers and foliage for arrangement
- Strip foliage
- Wire and tape floral materials
- Spray tint flowers

**010631-0204** Students will prepare floral arrangements for special occasions using the principles and elements of design.

- Identify and design a hand-tied bouquet
- Identify and design boutonnieres
- Identify and design corsages
- Construct bud vases
- Identify and design wedding flowers
- Identify and design sympathy flowers

- 010631-0205 Students will demonstrate techniques of using silk and dry materials.
- Spray-tint dried floral products
  - Prepare a silk or dried arrangement
  - Preserve plant materials for use in arrangements

## **STANDARD**

**010631-03 Students will demonstrate the propagation of greenhouse plants by seed, cuttings and bulbs in a maintained greenhouse environment.**

## **OBJECTIVES**

- 010631-0301 Students will properly operate environmental control systems that affect propagation.
- Identify greenhouse structures and their components
  - Identify and operate supplemental lighting
  - Identify and operate heating and cooling systems
  - Identify and operate ventilation systems
  - Identify and operate saran (for shade) or black cloth systems
- 010631-0304 Students will identify and classify floral plants.
- Classify floriculture plants as monocots or dicots
  - Classify floriculture plants as annuals, biennial or perennials

## **STANDARD**

**010631-04 Students will perform greenhouse maintenance activities.**

## **OBJECTIVES**

- 010631-0401 Students will carry out plant growth monitoring practices and techniques.
- Use a graphical tracking system
  - Identify harvest stages
  - Cut plants
- 010631-0402 Students will perform typical plant maintenance procedures for optimum plant growth.
- Space plants
  - Disbud plants
  - Tie plants to supports
  - Pinch plants
  - Identify symptoms of water stress
  - Identify symptoms of nutrient deficiency
  - Hand-irrigate plants as needed
  - Adjust temperatures for plants
  - Identify and adjust factors affecting humidity for optimum plant growth
- 010631-0403 Students will identify fertilization practices and terminology and use of growth-regulating compounds.
- Apply growth-regulating compounds as needed
  - Interpret fertilizer bag labels
  - Identify components of a complete fertilizer
  - Mix fertilizer solutions
  - Identify and use fertilizer injectors
  - Apply dry fertilizer as needed
  - Apply liquid fertilizer as needed

**STANDARD**

**010631-05    Students will maintain and prepare container and houseplants for sale.**

**OBJECTIVES**

010631-0501    Students will identify needs of container and houseplants.

- Attach care instructions
- Identify symptoms of nutrient deficiency

010631-0502    Students will prepare plants for sale.

- Clean plants and containers
- Trim plants
- Decorate plants and containers
- Calculate mark-up
- Price tag containers

010631-0503    Students will understand basics of marketing in floriculture and greenhouse industry.

- Arrange plants
- Recognize ways of maintaining and increasing the effectiveness of horticultural business displays
- Recognize how advertising is used
- Complete sales tickets
- Use proper telephone techniques